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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 10/065,745
Filing Date: November 14, 2002
Appellant(s): RIJAVEC, NENAD

Charles W. Peterson, Jr.
<u>For Appellant</u>

EXAMINER'S ANSWER

This is in response to the appeal brief filed 1/28/08 appealing from the Office action

mailed 5/18/07.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

No evidence is relied upon by the examiner in the rejection of the claims under appeal.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 112

1.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2.   Claims 10 and 11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 10 and 11 include the limitation "said sequencer remaining unchanged by additions and removals of connected and disconnected said raster image processors". This limitation is not described in the applicant's specification.

Claim Rejections - 35 USC § 101

3.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4.   Claim 9 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 9 is directed to a computer program. For claim 9 to be statutory, the applicant must state "A computer readable medium storing a computer program" (or equivalent) not a computer program comprising a computer readable medium.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Barry '943and Fujii '390.

Referring to claim 1, Barry '943 discloses an apparatus comprising:

a pipeline of elements processing print control data and having:

a plurality of raster image processors, each of which has an input port receiving

parsed page data (Rip engines 150, 152, and 154 of Fig. 1b, col. 1, lines 41-50); and

a sequencer (instruction operator for job file 114 of Fig. 1a) which has an output

port networked and communicating with, and directly connected to, the input ports of

said plurality of raster image processors (col. 4, lines 34-40) and an input port receiving

a print data stream (col. 3, lines 19-22), said sequencer monitoring data flows among

the pipelined elements and parsing a print data stream into local data portions related to

individual pages and global state data portions related to characteristics shared across

a plurality of pages (col. 4, lines 52-62), said sequencer packaging together parsed

page local and global state data portions (col. 4, lines 34-40);

said raster image processors processing in parallel packaged parsed page data

related to a plurality of pages (col. 2, lines 9-20).

The instruction operator is considered to be directly connected to the raster image processors because the output provides a physical transmission line to the inputs of the raster image processors. Whether, the transmission line is routed through the distributor, the wiring still provides a physical path to the raster image processors. In the same way, a computer can be considered directly connected to the internet although it may be routed through a modem or a device may be directly connected to a power source even if the power is routed through transistors. Further, since it has been held that omission of an element and its function in a combination where the remaining elements perform the same functions as before involves only routine skill in the art and therefore would have been obvious to one having ordinary skill in the art at the time of the invention.

Barry '943 does not disclose expressly a plurality of print head drivers.

Fujii '390 discloses a plurality of print head drivers, each of which controls the application of colorant to a sheet and has an input port receiving data signals; a rasterizer with an output port communicating with the input ports of said plurality of print head driver; and generating data signals to be communicated to said print head drivers (col. 6, lines 60-65).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to process rasterized data for print head drivers. The motivation for doing so would have been to allow driving a plurality of ink jet nozzles to form an image. Each individual print head driver corresponds to a separate color of the printer. Therefore, it

would have been obvious to combine Fujii '390 with Barry '943 to obtain the invention as specified in claim 1.

Referring to claim 3, Fujii '390 discloses wherein each of said raster image processors converts data from a form communicated as a print data stream to a form to be communicated as data signals to a print head driver (col. 6, lines 60-65).

7.   Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barry '943and Fujii '390 as applied to claim 1 above, and further in view of Venkateswar '016.

Referring to claim 2, Barry '943 and Fujii '390 discloses rasterizing images and generating data signals communicated to a print head driver, but does not disclose expressly a raster queue.

Venkateswar '016 discloses queuing packaged individual page data to be communicated to said raster image processors and further wherein individual ones of said raster image processors draw from said queued data as processing of data related to an individual page is completed (col. 2, lines 21-28).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to queue data designated for a plurality of rasterizers. The motivation for doing so would have been to increase the speed of image rasterization by preparing images designated for rasterization before the rasterizer requests new data. Therefore, it would have been obvious to combine Venkateswar '016 with Barry '943 and Fujii '390 to obtain the invention as specified in claim 2.

8.   Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Barry '943 and Fujii '390 as applied to claim 3 above, and further in view of Hohensee

'460.

Referring to claim 4, Barry '943 discloses raster image processors but does not

disclose expressly converting into a variable number of portions depending on whether

a page is to be blank, single colored, or multiple colored.

Hohensee '460 discloses each of said raster image processors converts data

from a form communicated as a print data stream into a variable number of portions

depending upon whether an individual page is to be blank or to be printed with a single

color or to be printed with multiple colors (col. 4, lines 53-60).

At the time of the invention, it would have been obvious to a person of ordinary

skill in the art to utilize a rasterizer to convert into a variable number of portions

depending on whether a page is to be blank, single colored, or multiple colored. The

motivation for doing so would have been to produce a separate bitmap for each color of

ink required to print the page. Therefore, it would have been obvious to combine

Hohensee '460 with Barry '943 to obtain the invention as specified in claim 4.

Referring to claim 5, Barry '943 discloses an apparatus comprising:

a pipeline of elements connected between a printer server and a printer and

processing print control data from said print server, and said pipeline of elements

having:

a plurality of raster image processors, each of which has an input port receiving

parsed page data (Rip engines 150, 152, and 154 of Fig. 1b, col. 1, lines 41-50); and

a sequencer (instruction operator for job file 114 of Fig. 1a) which has an output

port networked and communicating with the input ports of said plurality of raster image

processors (col. 4, lines 34-40) and an input port receiving a print data stream (col. 3,

lines 19-22), said sequencer monitoring data flows among the pipelined elements and

parsing a print data stream into local data portions related to individual pages and global

state data portions related to characteristics shared across a plurality of pages (col. 4,

lines 52-62), said sequencer packaging together parsed page local and global state

data portions (col. 4, lines 34-40);

said raster image processors processing in parallel packaged parsed page data

related to a plurality of pages (col. 2, lines 9-20).

Barry '943 does not disclose expressly a plurality of head drivers.

Fujii '390 discloses a plurality of print head drivers, each of which controls the

application of colorant to a sheet and has an input port receiving data signals (col. 6,

lines 60-65);

a rasterizer with an output port communicating with the input ports of said

plurality of print head driver (col. 6, lines 60-65); and

generating data signals to be communicated to said print head drivers (col. 6,

lines 60-65).

At the time of the invention, it would have been obvious to a person of ordinary

skill in the art to process rasterized data for print head drivers. The motivation for doing

so would have been allow driving a plurality of ink jet nozzles to form an image. Each

individual print head driver corresponds to a separate color of the printer.

Barry '943 does not disclose expressly converting into a variable number of portions depending on whether a page is to be blank, single colored, or multiple colored.

Hohensee '460 discloses each of said raster image processors converts data from a form communicated as a print data stream into a variable number of portions depending upon whether an individual page is to be blank or be printed with a single color or to be printed with multiple colors (col. 4, lines 53-60).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to utilize a rasterizer to convert into a variable number of portions depending on whether a page is to be blank, single colored, or multiple colored. The motivation for doing so would have been to produce a separate bitmap for each color of ink required to print the page. Therefore, it would have been obvious to combine Hohensee '460 with Barry '943 and Fujii '390 to obtain the invention as specified in claim 5.

9.   Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barry '943, Fujii '390, and Venkateswar '016.

Referring to claims 6 and 9, Barry '943 discloses a method comprising the steps of:

receiving a print data stream from a print server and parsing the stream into local (col. 4, lines 34-38) and global portions (col. 4, lines 26-30);

packaging together parsed local and global print stream data portions (col. 5, lines 8-13).

Barry '943 does not disclose expressly a raster queue.

Venkateswar '016 discloses queuing packaged print stream data portions; and communicating queued packaged print stream data portions directly to a plurality of raster image processors (col. 2, lines 21-28).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to queue data designated for a plurality of rasterizers. The motivation for doing so would have been to increase the speed of image rasterization by preparing images designated for rasterization before the rasterizer requests new data.

Barry '943 discloses processing a plurality of communicated packaged print stream data portions in parallel but does not disclose expressly a plurality of head drivers.

Fujii '390 discloses generating print head driving data signals; and communicating the generated print head driving data signals to a printer and to the print heads of said printer (col. 6, lines 60-65).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to process rasterized data for print head drivers. The motivation for doing so would have been allow driving a plurality of ink jet nozzles to form an image. Each individual print head driver corresponds to a separate color of the printer. Therefore, it would have been obvious to combine Fujii '390 with Barry '943 and Venkateswar '016 to obtain the invention as specified in claims 6 and 9.

Referring to claim 7, Barry '943 discloses wherein said step of packaging print

stream data portions comprises packaging portions applicable to individual pages (col.

7, lines 34-36).

Referring to claim 8, Barry '943 discloses wherein said step of processing

comprises generating bit map data signals (col. 10, lines 59-60).

10.   Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Barry '943 and Fujii '390 as applied to claims 1 and 5 above, and in further view of

Venkateswar '016.

Referring to claims 10 and 11, Barry '943 discloses the sequencer and raster

image processors but does not disclose expressly wherein the sequencer's said output

port is connected to the raster image processors' said input ports.

Venkateswar '016 discloses wherein the sequencer's said output port (main

processor 52) is connected to the raster image processors' said input ports (parallel

processors 54) (Fig. 2a, see abstract).

At the time of the invention, it would have been obvious to a person of ordinary

skill in the art to connect the master processor with the parallel processors. The

motivation for doing so would have been to eliminate the need for a separate

component to separate and distribute data.

Barry '943 further discloses wherein said raster image processors may be

connected and disconnected, said sequencer remaining unchanged by additions and

removals of connected and disconnected said raster image processors (col. 5, lines 38-

45).   Therefore, it would have been obvious to combine Venkateswar '016 with Barry

'943 to obtain the invention as specified in claims 10 and 11.

(10) Response to Argument

Applicant argues on pages 7 and 8 of the response in essence that:

Claim 9 recites a computer program product comprising a computer readable medium

with program instructions stored thereon and is therefore statutory.

      a.   According to the applicant's specification, the machine-readable medium

      may be "downloaded as a computer program product, wherein the program may

      be transferred from a remote computer to a requesting computer by way of data

      signals embodied in a carrier wave or other propagation medium via a

      communication link (e.g., a modem or a network connection)." (see paragraph

      34).   Claim 9 is seemingly a patentable process, however it is in reality seeking

      patent protection of the computer program in the abstract as evidenced by

      applicant's specification. Because claim 9 is merely a computer program, it does

      not provide a practical application that produces useful and tangible results.

Applicant argues on pages 8-10 of the response in essence that:

Claims 10 and 11 are enabled by the application because a skilled artisan would

understand that as a result of networking the sequencer 21 with the RIP machines 22a-

n, that the sequencer 21 remains unchanged by adding and removing RIP machines

22a-n.

b.   Claims 10 and 11 are rejected under 35 U.S.C. 112, first paragraph, as

failing to comply with the written description requirement, not as failing to comply

with the enablement requirement as the arguments suggest. The applicant's

specification provides no disclosure that the sequencer would remain unchanged

by adding and removing RIP machines. Further, the sequencer must make some

accommodation for instructing an added RIP machine which would constitute the

sequencer being changed. Therefore, a person of ordinary skill in the art would

recognize that adding or removing a RIP machine to the sequencer would not

cause the sequencer to remain unchanged.

Applicant argues on pages 10-13 of the response in essence that:

Barry '943 does not disclose a sequencer which has an output port networked and

communicating with, and directly connected to, the input ports of said plurality of raster

image processors.

c.   Barry '943 discloses a sequencer (instruction operator for job file 114 of

Fig. 1a) which has an output port networked and communicating with (col. 4,

lines 34-48, instruction operator 114 partitions print job into portions sent to RIP

engines via distributor 116), and directly connected to, the input ports of said

plurality of raster image processors (Rip engines 150, 152, and 154 of Fig. 1b,

col. 1, lines 41-50). Although the distributor 118 routes print job portions from

sequencer 114 to the RIP engines 150-154 (distributor 118 functions only to

direct data, see Fig. 1, col. 5, lines 46-51), the sequencer is considered to be

directly connected to the RIP engines because there exists a wired connection in

which the signal travels from the sequencer to the RIP engines. The combination

of distributor 116, path 142, and RIP engine 150 can be viewed as one input to

the output port of the raster image processor. This occurs in the same manner as

a computer that is considered directly connected to a network although it may be

connected through a router or modem. Further, the claim specifies the output

port of the sequencer is networked with the input port of the raster image

processor which indicates that the path comprises other components besides

simply a straight path.

Applicant argues on pages 14 and 15 of the response in essence that:

Vankateswar '016 in view of Barry '943 does not teach connecting and disconnecting

raster image processors without changing the sequencer because one could not add

and subtract processors from the chip in Vankateswar '016.

> d.   Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being
>
> unpatentable over Barry '943 and Fujii '390 in further view of Venkateswar '016.
>
> Barry '943 discloses wherein said raster image processors may be connected
>
> and disconnected, said sequencer remaining unchanged by additions and
>
> removals of connected and disconnected said raster image processors (col. 5,
>
> lines 38-45). Vankateswar '016 teaches wherein the sequencer's said output
>
> port (main processor 52) is connected to the raster image processors' said input
>
> ports (parallel processors 54) (Fig. 2a, see abstract). In response to applicant's

arguments against the references individually, one cannot show nonobviousness

by attacking references individually where the rejections are based on

combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871

(CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir.

1986). Further, the applicant must explain why the system of Barry '943 in view

of Vankateswar '016 does not teach the claimed limitation, not the system of

Vankateswar '016 in view of Barry '943.

Applicant argues on pages 15-17 of the response in essence that:

Vankateswar '016 does not disclose communicating queued packaged print stream data

portions directly over a network to a plurality of raster image processors.

e.   The applicant's specification provides no definition of networked.

According to the definition within the art, a network consists of a system or group

of interconnected elements. Because the parallel processors of Vankateswar

'016 are interconnected to the master processor, they are considered networked.

As shown in Fig. 2a of Vankateswar '016, the master processor communicates

directly to the parallel processors (abstract, col. 2, lines 21-28, the main

processor converts print data into paths that are then rasterized using parallel

processors in concert with the main processor). Therefore, Vankateswar '016

discloses communicating queued packaged print stream data portions directly

over a network to a plurality of raster image processors.

Applicant argues on pages 17-19 of the response in essence that:

The combination of Barry '943 with Fujii '390 and Hohensee '460 does not disclose a

pipeline of elements connected between a print server and a printer and processing

print control data from said print server.

f.   Barry '943 discloses a pipeline of elements connected between a printer

server (control PC 1020 of Fig. 10, col. 15, lines 10-28) and a printer (printer

1026 of Fig. 10, col. 15, lines 10-28). Control PC 1020 can be considered a print

server because it receives print jobs and commands the print

processing/rasterization process.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the

Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Peter K Huntsinger/

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